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NOTES

Mutually Defined 0596593ASHLAND CHEMICAL
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CHEMICAL COMPANY FOR FURTHER INFORMATION.

Supplier/Manufacturer:
DOW CHEMICAL U.S.A.
MIDLAND MI 48674

Emergency Contact-Shipper: EMERGENCY PHONE Telephone: 517-636-4400

Vendor's (Seller's) Item Number: 05640

Product: ~~LIQUIDOW (R) FOOD GRADE CALCIUM CHLORIDE~~
MATERIAL SAFETY DATA SHEET

2. COMPOSITION/INFORMATION ON INGREDIENTS

Calcium chloride	CAS# 010043-52-4	32-33%
Potassium chloride	CAS# 007447-40-7	1%
Water	CAS# 007732-18-5	67-68%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Colorless liquid solution. Odorless. Causes eye irritation.

POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

EYE: Material may be handled at elevated temperatures; contact with heated material may cause thermal burns. May cause severe irritation with corneal injury. Effects may be slow to heal.

SKIN: Short single exposure not likely to cause significant skin irritation. Prolonged or repeated exposure may cause skin irritation, even a burn. May cause more severe response if confined to skin or skin is abraded (scratched or cut). Material may be handled at elevated temperatures; contact with heated material may cause thermal burns. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Not classified as corrosive according to DOT.

INGESTION: Single dose oral toxicity is believed to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. Ingestion may cause gastrointestinal irritation or ulceration.

INHALATION: Vapors are unlikely due to physical properties. Mists may cause irritation to upper respiratory tract.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: No relevant information found.

4. FIRST AID

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: Wash off in flowing water or shower.

INGESTION: Do not induce vomiting. Give large amounts of water or milk if available and transport to medical facility.

INHALATION: Remove to fresh air if effects occur. Consult a physician.

NOTE TO PHYSICIAN: If burn is present, treat as any thermal burn, after decontamination. May cause tissue destruction leading to stricture. If lavage is performed, suggest endotracheal and/or esophageal control. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

SKIN PROTECTION: When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron or full-body suit will depend on operation. If hands are cut or scratched, use gloves impervious to this material even for brief exposures. Use gloves with insulation for thermal protection, when needed.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. In misty atmospheres, use an approved mist respirator.

EXPOSURE GUIDELINES: Calcium chloride: Dow IHG is 10 mg/m³.
Potassium Chloride: Dow IHG is 10 mg/m³.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Colorless liquid solution.
ODOR: None.
VAPOR PRESS: 7-15 mmHg @ 25C, 77F.
VAPOR DENSITY: Same as water.
BOILING POINT: 230-251F, 110-122C
SOLUBILITY IN WATER: Completely miscible.
SPECIFIC GRAVITY: 1.297-1.437 @ 25C/70F

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable. Hygroscopic.

CONDITIONS TO AVOID: None known.

INCOMPATIBILITY WITH OTHER MATERIALS: Corrosive to some metals. Avoid contact with metals such as: brass, mild steel, aluminum, or ferrous metals. Flammable hydrogen may be generated from contact with metals such as zinc or sodium. Avoid contact with sulfuric acid.

HAZARDOUS DECOMPOSITION PRODUCTS: Does not decompose.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION (See Section 3 for Potential Health

Effects. For detailed toxicological data, write or call the address or non-emergency number shown in Section 1)

ACUTE

SKIN: The LD₅₀ for skin absorption in rabbits is 5000 mg/kg for CaCl₂.

INGESTION: The oral LD₅₀ for rats is in the range of 900-2100 mg/kg for CaCl₂ (100% basis).

MUTAGENICTY (EFFECTS ON GENETIC MATERIAL): For CaCl₂, in vitro mutagenicity studies were negative.

12. ECOLOGICAL INFORMATION (For detailed Ecological data, write or call

the address or non-emergency number shown in Section 1)

ENVIRONMENTAL FATE

MOVEMENT & PARTITIONING: Partitioning from water to n-octanol is not applicable.

DEGRADATION & TRANSFORMATION: Biodegradation is not applicable.

ECOTOXICOLOGY: Based largely or completely on data for major component(s). Material is practically non-toxic to aquatic organisms on an acute basis (LC₅₀ greater than 100 mg/L in

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

The CAS number(s) for TSCA is(are):

CAS# 010043-52-4
CAS# 007447-40-7
CAS# 007732-18-5

STATE RIGHT-TO-KNOW: This product is not known to contain any substances subject to the disclosure requirements of

New Jersey
Pennsylvania

OSHA HAZARD COMMUNICATION STANDARD:

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

This product has been categorized as a "Hazardous Chemical" due to the possibility of eye or skin irritation.

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND):

To the best of our knowledge, this product contains no chemical subject to reporting under CERCLA.

CANADIAN REGULATIONS
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WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

D2B - eye or skin irritant
Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

CPR STATEMENT: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

COMPONENTS:	CAS #	AMOUNT(%w/w)
Calcium chloride	CAS# 010043-52-4	32-33%

16. OTHER INFORMATION

MSDS STATUS: Converted to 16-section format. Revised all sections.

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